

1 **Claims: I claim:**

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3 1. A method for supplying oxygen to a biological entity comprising the steps of :
4 a. dissolving oxygen into a perfusate,
5 b. forcing the perfusate through the biological entity,
6 whereby substantially high levels of oxygen are available to satisfy the metabolic demand
7 of the biological entity

8 2. An apparatus for supplying oxygen to a biological entity comprising:

9 a. a vessel capable of a predetermined internal gas pressure
10 b. a pressurized gas capable of producing a predetermined gas pressure within said vessel,
11 c. a pressure hose to deliver said gas
12 d. a perfusate
13 e. a pump to circulate said perfusate
14 f. an oxygenator to dissolve oxygen into said perfusate
15 g. a plurality of fluid delivery tubes to deliver said perfusate
16 h. a biological entity
17 i. a plurality of holes in said vessel necessary to allow said tubes or hose to pass through
18 said vessel
19 j. a perfusate container
20 k. a means for attachment of said fluid delivery tubes to said perfusate container, said pump,
21 said oxygenator, and said biological entity

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23 whereby substantially high levels of oxygen are available to satisfy the metabolic demand
24 of said biological entity

25 3. An apparatus for supplying a metabolic supplement to a biological entity comprising:

26 a. a vessel capable of a predetermined internal gas pressure
27 b. a pressurized gas capable of producing a predetermined gas pressure within said vessel,
28 c. a pressure hose to deliver said gas
29 d. a perfusate
30 e. a pump to circulate said perfusate
31 f. an oxygenator to dissolve oxygen into said perfusate
32 g. a plurality of fluid delivery tubes to deliver said perfusate
33 h. a biological entity

- 1 i. a plurality of holes in said vessel necessary to allow said tubes or hose to pass through
2 said vessel
- 3 j. a perfusate container
- 4 k. a means for attachment of said fluid delivery tubes to said perfusate container, said pump,
5 said oxygenator, and said biological entity
- 6 l. a metabolic supplement
- 7 m. a plurality of access ports connected to said fluid delivery tube to allow the addition of
8 metabolic supplements to said perfusate
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- 10 whereby the effect of said metabolic supplement to said biological entity can be
11 monitored
- 12

add
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